

Remarks

Claims 1-70 are pending and stand rejected under 35 U.S.C. §§ 102 and 103 based on various earlier U.S. patents. Independent claims 1, 15, 29, 43, and 57 have been amended in response to the rejections; no new matter has been added.

Claim 1 is directed to "a method of configuring a first network device for connection to a communications network subnet" In part, the claim requires "non-iteratively determining, with a configuration determination module of the first network device, configuration attributes for operably connecting the first network device to the subnet." Thus, the device to be connected itself non-iteratively determines what configuration attributes it needs to connect to the network subnet. Examples of "non-iteratively determining" given in the detailed description (and claimed in dependent claims) include the passive listening process described starting at p. 6, line 22, and the querying of adjacent devices process described starting at p. 8, line 24. Such non-iterative determining is not taught or suggested by the prior art.

For example, the cited Monot reference basically takes random guesses at possible values of configuration attributes, and tries over and over to send out messages using the guessed values to see if they work. *See, e.g., Abstract* ("sends a series of probes ... Each probe is constructed to test a specific parameter value, and to restrict a set of potential values for the parameter. The automatic configuration program receives answers back from the carrier equipment, which may accept or reject, or not respond to the probe.... The automatic configuration program thus, tests a plurality of the applicable parameter values for a parameter and iteratively narrows the set of potential values until the parameter value is established, or some error condition is encountered that prevents configuration of the parameter.") Thus, Monot's iterative approach sends out and receives multiple messages for each parameter value that it configures. While this may be acceptable under some network conditions, it would be a disadvantage under some conditions, such as

when the network routes are reconverging after an equipment failure. Under such conditions, Monot's iterative flooding of messages would be a definite drawback, especially in contrast to the non-iterative approach of claim 1 as explained above and in the detailed description of the application.

The Examiner also cited Hansen (U.S. Patent 5,838,907) and Li (U.S. Patent 6,012,088), but neither reference teaches or suggests a system or method as in claim 1 wherein a device to be connected to network determines for itself "configuration attributes for operably connecting ... to the subnet," and then automatically itself "configuring ... according to the configuration attributes." Hansen describes "a configuration manager for configuring a network device *remotely* coupled thereto ..." Thus, in Hansen, a central network server senses when a new device is added to the network and determines configuration attributes for the new device and then sends them out to the new device. In simplest terms, in Hansen, the network does all the work when a new device is added, and the new device is "stupid." In the method of claim 1, the new device determines for itself the attributes for connecting to the network, and the new device is "smart." Similarly, in Li, a new network device does not determine for itself its configuration attributes, but rather, "downloads configuration data from a configuration server containing customer site specific configuration data." *Abstract*.

As explained above, none of the cited references, separately or together, teaches or suggests "a method of configuring a first network device for connection to a communications network subnet," as in claim 1, wherein the first network device non-iteratively determines for itself "configuration attributes for operably connecting the first network device to the subnet." Claims 2-14 depend from claim 1 and, therefore, are allowable for the same reasons. Claims 15-28 are device claims similar to method claims 1-14 and are allowable for the same reasons. Likewise, claims 29- 42 are network claims similar to claims 1-14 and allowable for the same reasons. Claims 43-56 are computer program product claims similar to claims 1-14

and are also allowable for the same reasons. Claims 57-70 are means-plus-function device claims similar to claims 1-14 and are also allowable for the same reasons.

Conclusion

Applicants believe that no extension of time is required; however, this conditional petition is made to provide for the possibility that the applicants have inadvertently overlooked the need for an extension of time. If any additional fees are required for the timely consideration of this application, please charge deposit account number 19-4972. It is submitted that all the claim rejections have been addressed and that all of the pending claims are now in a condition for allowance. Reconsideration of the application and issuance of a Notice of Allowance are respectfully requested.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES

1. A method of configuring a first network device for connection to a communications network subnet having a second network device, the method comprising:

non-iteratively determining, with a configuration determination module of the first network device, configuration attributes for operably connecting the first network device to the subnet; and

configuring the first network device, with an autoconfiguration module of the first network device, according to the configuration attributes so that the first network device is operably connected to the subnet.

15. An autoconfiguring data router connected to a communications network subnet having a second network data router, the autoconfiguring data router comprising:

a configuration determination module that non-iteratively determines configuration attributes for operably connecting the autoconfiguring data router to the subnet; and

an autoconfiguration module that configures the autoconfiguring data router according to the configuration attributes so that the autoconfiguring data router is operably connected to the subnet.

29. A computer network having at least one subnetwork, the at least one subnetwork having a plurality of data routers that communicate data packets over the network, the subnetwork including at least one autoconfiguring data router, the at least one autoconfiguring data router comprising:

a configuration determination module that non-iteratively determines configuration attributes for operably connecting the autoconfiguring data router to the subnet; and

an autoconfiguration module that configures the autoconfiguring data router according to the configuration attributes so that the autoconfiguring data router is operably connected to the subnet.

43. A computer program product for use on a computer system for configuring a first network device for connection to a communications network subnet having a second network device, the computer program product comprising a computer-usable medium having computer-readable program code thereon, the computer readable program code including:

program code for non-iteratively determining configuration attributes for operably connecting the first network device to the subnet; and

program code for configuring the first network device according to the configuration attributes so that the first network device is operably connected to the subnet.

57. An autoconfiguring data router connected to a communications network subnet having a second network data router, the autoconfiguring data router comprising:

means for non-iteratively determining configuration attributes for operably connecting the autoconfiguring data router to the subnet; and

means for configuring the autoconfiguring data router according to the configuration attributes so that the autoconfiguring data router is operably connected to the subnet.